

## ONLINE SEARCH REQUEST FORM

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USER Step Rose SERIAL NUMBER 753907ART UNIT 125 PHONE 308-7602 DATE 3/3/92

Please give a detailed statement of requirements. Describe as specifically as possible the subject matter to be searched. Define any terms that may have special meaning. Give examples or relevant citations, authors, or keywords, if known.

You may include a copy of the broadest and/or relevant claim(s).

In each of CAS Online, Derwent, Biosis & Medline  
print full size abstracts please  
*and 1989 on earlier only in*

I a fluticasone or fluticasone propionate  
or RN 80474-14-2

90 568-533

" RN 136112-02-02

Ia print out all entries on I } L4

Ib note one of: asthma or inhalation or metered dose L5 -3  
or inhaler or aerosol

II print out all entries of I

with salmeterol or RN 89365-50-4 } L9 -3

III print out all entries of I with salbutamol or RN } L10 -2

IV print out Family of Patents for Derwent

ST.BR. 2 088877 → CAN 96(19)A3044P

ST.BR. 2 140800 102(11)695383P

V Find abstracts in derivatives for IV (or family members)  
print out

CAS ONLINE

\*\*\*\*\*  
STAFF USE ONLY

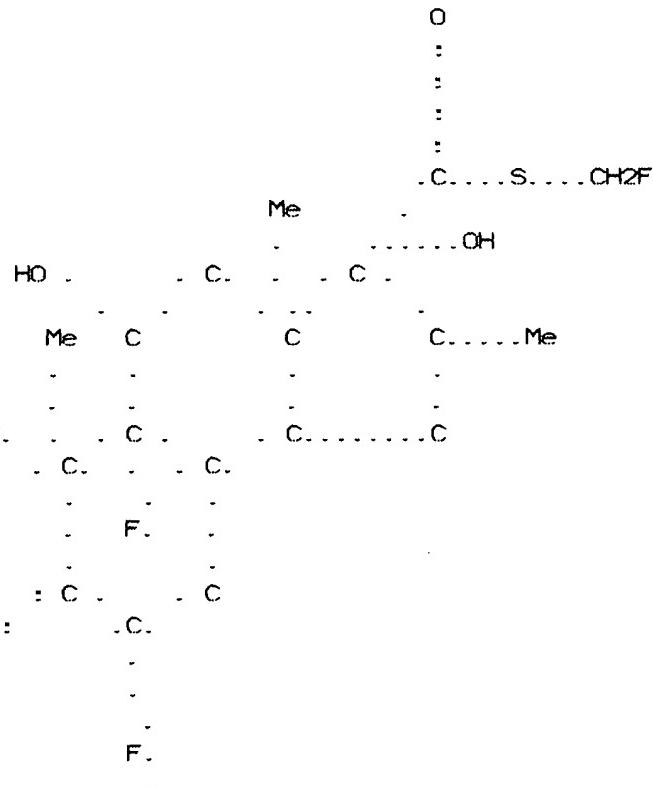
COMPLETED 3-692  
SEARCHER JOHN DANTZER  
ONLINE TIME 29 TOTAL TIME 39  
(in minutes)  
NO. OF DATABASES 1

SYSTEMS  
 CAS ONLINE  
 DARC/QUESTEL  
 DIALOG  
 SDC  
 OTHER

FILE 'REGISTRY' ENTERED AT 12:47:20 ON 06 MAR 92  
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STRUCTURE FILE UPDATES: HIGHEST RN 139341-64-3  
DICTIONARY FILE UPDATES: 29 FEB 92 (920229/ED) HIGHEST RN 139311-38-9

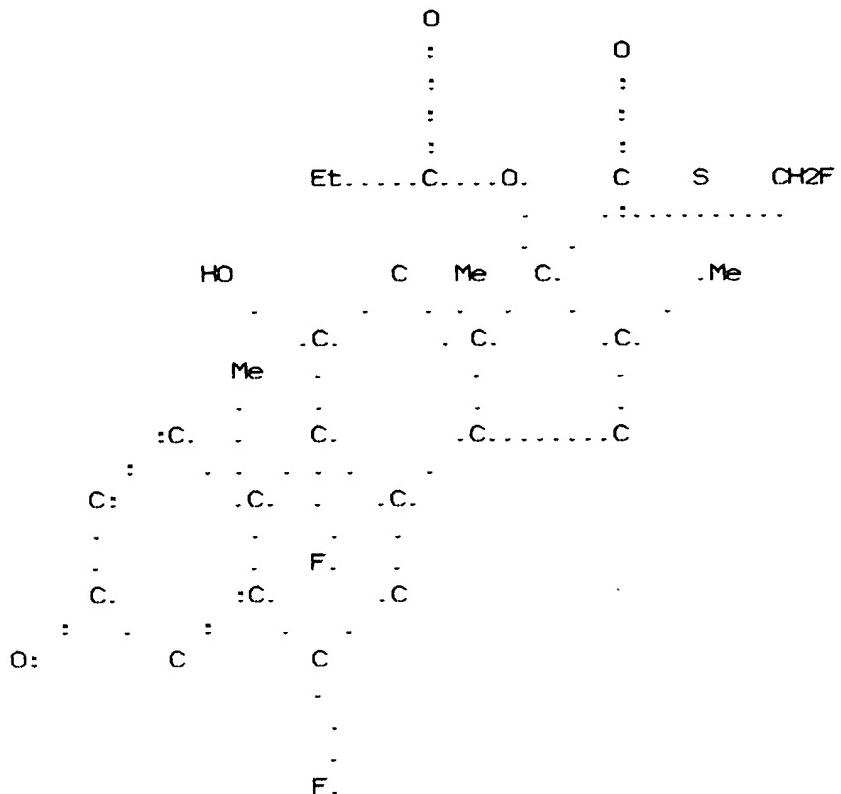
L1 ANSWER 1 OF 1 COPYRIGHT 1992 ACS  
RN 90566-53-3  
CN Androsta-1,4-diene-17-carbothioic acid, 6,9-difluoro-11,17-dihydroxy-  
16-methyl-3-oxo-, S-(fluoromethyl) ester,  
(6.alpha.,11.beta.,16.alpha.,17.alpha.)- (9CI) (CA INDEX NAME)  
CN Fluticasone  
MF C22 H27 F3 O4 S  
LC CA, PHAR, WHO  
STE 4:6A,11B,16A,17A. ANDROST



2 REFERENCES IN FILE CA (1967 TO DATE)

=> d 12

L2 ANSWER 1 OF 1 COPYRIGHT 1992 ACS  
RN 80474-14-2  
CN Androsta-1,4-diene-17-carbothioic acid, 6,9-difluoro-11-hydroxy-16-  
methyl-3-oxo-17-(1-oxopropoxy)-, S-(fluoromethyl) ester,  
(6.alpha.,11.beta.,16.alpha.,17.alpha.)- (9CI) (CA INDEX NAME)  
CN Fluticasone propionate  
MF C25 H31 F3 O5 S  
CI COM  
LC BIOSIS, CA, CIN, MEDLINE, PHAR  
STE 4:6A,11B,16A,17A. ANDPOST



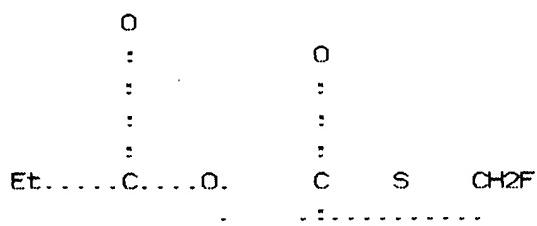
2 REFERENCES IN FILE CA (1967 TO DATE)

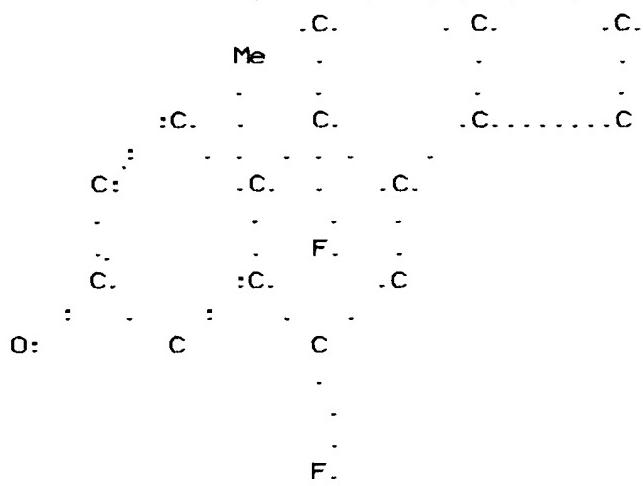
=> d 13

L3 ANSWER 1 OF 1 COPYRIGHT 1992 ACS  
 RN 136112-02-2  
 CN Androsta-1,4-diene-17-carbothioic acid, 6,9-difluoro-11-hydroxy-16-methyl-3-oxo-17-(1-oxopropoxy)-, S-(fluoromethyl) ester, (6.alpha.,11.beta.,16.alpha.,17.alpha.)-, mixt. with (.+-.)-4-hydroxy-.alpha.1-[[[6-(4-phenylbutoxy)hexyl]amino]methyl]-1,3-benzenedimethanol 1-hydroxy-2-naphthalenylcarboxylate (salt) (9CI) (CA INDEX NAME)  
 CN 2-Naphthalenecarboxylic acid, 1-hydroxy-, compd. with (.+-.)-4-hydroxy-.alpha.1-[[[6-(4-phenylbutoxy)hexyl]amino]methyl]-1,3-benzenedimethanol, mixt. contg. (9CI)  
 CN 1,3-Benzenedimethanol, 4-hydroxy-.alpha.1-[[[6-(4-phenylbutoxy)hexyl]amino]methyl]-, (.+-.), 1-hydroxy-2-naphthalenecarboxylate (salt), mixt. contg. (9CI)  
 CN Fluticasone propionate mixt. with salmeterol 1-hydroxy-2-naphthoate (salt)  
 MF C25 H37 N 04 . C25 H31 F3 05 S . C11 H8 03  
 SR CA  
 LC CA

CM 1

CRN 80474-14-2  
 CMF C25 H31 F3 05 S  
 CSTE 4:6A, 11B, 16A, 17A. ANDROST





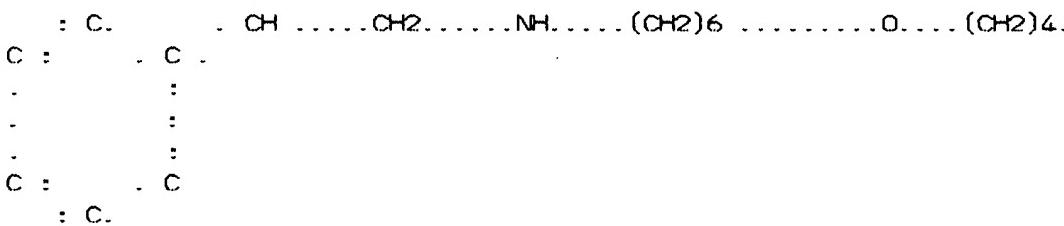
CM 2

CRN 94749-08-3  
 CMF C25 H37 N 04 . C11 H8 O3

CM 3

CRN 89365-50-4  
 CMF C25 H37 N 04  
 CSTE 3:(+)

OH



HO.

CH2.....OH

Page 1-A

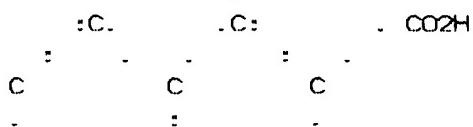
.....Ph

Page 1-B

CM 4

CRN 86-48-6  
 CMF C11 H8 O3

OH



C: . C. : C  
: . :  
C C

## 1 REFERENCES IN FILE CA (1967 TO DATE)

=&gt; CA 136112-02-2

CA 115(14)14226ob

=>  
=> fil ca

FILE 'CA' ENTERED AT 12:49:40 ON 06 MAR 92

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FILE COVERS 1967 - 21 FEB 92 (920221/ED) VOL 116 ISS 08.

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=> fil reg  
FILE 'REGISTRY' ENTERED AT 12:51:12 ON 06 MAR 92  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
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STRUCTURE FILE UPDATES: HIGHEST RN 139341-64-3

DICTIONARY FILE UPDATES: 29 FEB 92 (920229/ED) HIGHEST RN 139311-38-9

=> s salmeterol/cn  
L6 1 SALMETEROL/CN

=&gt; d

L6 ANSWER 1 OF 1 COPYRIGHT 1992 ACS  
RN 89365-50-4  
CN 1,3-Benzenedimethanol, 4-hydroxy-.alpha.1-[[[6-(4-phenylbutoxy)hexyl]amino]methyl]-, (.+-.)- (9CI) (CA INDEX NAME)  
CN Salmeterol  
DR 94749-03-8  
MF C25 H37 N 04  
CI COM  
LC BIOSIS, CA, CIN, MEDLINE, PHAR, WHO  
STE 3:(+-)

OH

-

-

-

: C. . CH .....CH2.....NH.....(CH2)6 .....O....(CH2)4.

C : . C .

: .

: .

: .

: .

CH2.....OH

Page 1-A

.....Ph

Page 1-B

14 REFERENCES IN FILE CA (1967 TO DATE)

=

=> s salbutamol/cn

L8 1 SALBUTAMOL/CN

=> d

L8 ANSWER 1 OF 1 COPYRIGHT 1992 ACS

RN 18559-94-9

CN 1,3-Benzenedimethanol, .alpha.1-[[[(1,1-dimethylethyl)amino]methyl]-4-hydroxy- (9CI) (CA INDEX NAME)

CN Salbutamol

CN m-Xylene-.alpha.,.alpha.'-diol, .alpha.1-[(tert-butylamino)methyl]-4-hydroxy- (8CI)

CN AH 3365

CN Albuterol

CN Aerolin

CN Sultanol

CN Ventolin

CN Saventol

FS 3D CONCORD

MF C13 H21 N O3

CI COM

LC ANABSTR, BEILSTEIN, BIOSIS, CA, CASREACT, CIN, CJACS, CSCHEM, CSNB, EINECS, IFICDB, IFIPAT, IFTIUDB, MEDLINE, PHAR, RTECS, WHO

OH

: C. CH.....CH2.....NHBu-t

: C C

: :

: :

. C: . C

HO.

C

:

CH2.....OH

1218 REFERENCES IN FILE CA (1967 TO DATE)

=> fil ca

FILE 'CA' ENTERED AT 12:52:30 ON 06 MAR 92

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FILE COVERS 1967 - 21 FEB 92 (920221/ED) VOL 116 ISS 08.

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FILE 'REGISTRY' ENTERED AT 12:47:20 ON 06 MAR 92

E FLUTICASONE/CN

L1 1 S E3

L2 1 S E4

FILE 'REGISTRY' ENTERED AT 12:48:29 ON 06 MAR 92

L3 1 S E5

FILE 'CA' ENTERED AT 12:49:40 ON 06 MAR 92

L4 5 S (FLUTICASONE#/IA OR L1 OR L2 OR L3)

L5 3 S L4 AND (ASTHMA? OR INHAL? OR DOSE# OR AEROSOL?)/IA

FILE 'CA' ENTERED AT 12:51:09 ON 06 MAR 92

FILE 'REGISTRY' ENTERED AT 12:51:12 ON 06 MAR 92

L6 1 S SALMETEROL/CN

L7 0 S SALBUTANOL/CN

L8 1 S SALBUTAMOL/CN

FILE 'CA' ENTERED AT 12:52:30 ON 06 MAR 92

L9 3 S L4 AND (SALMETEROL?/IA OR L6)

L10 2 S L4 AND (SALBUTAMOL?/IA OR L8)

=> d 14 1-5 all;d 15 1-3;d 19 1-3;d 110 1-2

ALL 5 CITES ↴

L4 ANSWER 1 OF 5 COPYRIGHT 1992 ACS  
AN CA115(18):189788v  
TI Hydrofluorocarbon propellants for pharmaceutical aerosols  
AU Steele, Gerald; Somani, Asit; Lim, Joseph Geok Paan  
CS Fisons PLC  
LO UK  
SO PCT Int. Appl., 18 pp.  
PI WO 9111173 A1 8 Aug 1991  
DS W: CA, JP, US  
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE  
AT WO 91-GB133 30 Jan 1991  
PRAI GB 90-2351 2 Feb 1990  
GB 90-23655 31 Oct 1990  
GB 90-26476 5 Dec 1990  
IC ICM A61K009-12  
ICS A61K009-72  
SC 63-6 (Pharmaceuticals)  
DT P  
CO PIXXD2  
PY 1991  
LA Eng  
AB A pressurized aerosol compn. comprises a liquefied hydrofluorocarbon propellant contg. substantially no nonhydrofluorocarbon solvent having dispersed therein a medicament and a fluorinated surfactant. The propellants are substantially taste- and odor-free and have suitable vapor pressures for the administration of medicaments by inhalation, yet are environmentally safe and acceptable. Thus, a compn. contg. nedocromil Na 0.200, FC 431 (fluorinated acrylic polymer) 0.061, and CF<sub>3</sub>CFH<sub>2</sub> 11.979 g was filled into Al aerosol canister.  
KW fluoro hydrocarbon propellant drug aerosol; nedocromil tetrachloroethane propellant aerosol  
IT Bronchodilators  
(aerosol of, hydrofluorocarbon propellants for)  
IT Pharmaceutical dosage forms  
(aerosols, inhalants, hydrofluorocarbon propellants in)  
IT Hydrocarbons, biological studies  
(fluoro, propellant for pharmaceutical aerosols)  
IT 51-55-8, Atropine, biological studies 1944-12-3, Fenoterol

Fenoterol 15826-37-6, Sodium cromoglycate 18559-94-9, Salbutamol  
22254-24-6, Ipratropium bromide 23031-25-6, Terbutaline  
38677-81-5, Pirbuterol 51022-70-9, Salbutamol sulfate  
54063-54-6, Reproterol 69049-74-7, Nedocromil sodium 73573-87-2  
85197-77-9, Tipredane 89365-50-4 \*\*\*90566-53-3\*\*\*  
. (aerosol of, hydrofluorocarbon propellants for)  
IT 75-37-6, 1,1-Difluoroethane 431-89-0 811-97-2,  
1,1,1,2-Tetrafluoroethane  
. (propellant for pharmaceutical aerosols)  
IT 11114-17-3, FC 430 12707-52-7, FC 431 25322-68-3, Polyethylene  
glycol 106392-12-5, Poloxamer  
(surfactant for pharmaceutical aerosols)

L4 ANSWER 2 OF 5 COPYRIGHT 1992 ACS

AN CA115(14):142260b

TI Pharmaceutical inhalants containing a bronchodilator and a steroidial  
anti-inflammatory agent

AU Palmer, James Barry Douglas

CS Glaxo Group Ltd.

LO UK

SO Eur. Pat. Appl., 8 pp.

PI EP 416951 A1 13 Mar 1991

DS R: AT, DE, DK, ES, GR, LU, NL, SE

AI EP 90-309846 7 Sep 1990

PRAI GB 89-20392 8 Sep 1989

GB 89-23644 20 Oct 1989

IC ICM A61K031-57

ICI A61K031-57, A61K031-135

SC 63-6 (Pharmaceuticals)

DT P

CO EPXXDW

PY 1991

LA Eng

AB Pharmaceutical compns. for treatment of respiratory disorders  
comprise effective amts. of salmeterol (and/or a physiol. acceptable  
salt thereof) and fluticasone propionate for simultaneous,  
sequential, or sep. administration by inhalation. The compn.  
permits the establishment of a twice daily dosing regimen and shows  
greater efficiency and longer duration of bronchodilating activity  
than previously known combinations. Thus, a metered dose inhaler  
contained salmeterol 1-hydroxy-2-naphthoate 25.0, fluticasone  
propionate 25.0, stabilizer 5.0 .mu.g, CC13F 23.70, and CC12F2 61.25  
mg per actuation.

KW respiratory disease salmeterol fluticasone inhalant

IT Respiratory tract

(disease, treatment of, by inhalation of salmeterol and  
fluticasone propionate combination)

IT Pharmaceutical dosage forms

(inhalants, of salmeterol and fluticasone propionate combination,  
for respiratory disorder treatment)

IT Pharmaceutical dosage forms

(powders, inhalants, of salmeterol and fluticasone propionate  
combination, for respiratory disorder treatment)

IT 136112-01-1 \*\*\*136112-02-2\*\*\*

(pharmaceutical inhalants contg., for respiratory disorder  
treatment)

L4 ANSWER 3 OF 5 COPYRIGHT 1992 ACS

AN CA114(20):192593n

TI Nonphospholipid pharmaceutical liposomes

AU Radhakrishnan, Ramachandran

CS Liposome Technology, Inc.

LO USA

SO PCT Int. Appl., 96 pp.

PI WO 9006775 A1 28 Jun 1990

DS N 26 EP 17 17

DO RW: AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, SE  
AI WO 89-US5525 6 Dec 1989  
PRAI US 88-284158 14 Dec 1988  
US 88-284216 14 Dec 1988  
IC A61K043-00; A61K049-00; A61K037-22  
SC 63-6 (Pharmaceuticals)  
SX 1  
DT P  
CO PIXXD2  
PY 1990  
LA Eng  
AB A nonconventional liposome compn. consisting of nonphospholipid lipids, esp. cholesterol and cholesterol ester salts, are used for encapsulation of drugs. They are useful for sustained release of steroids, and are suitable for treatment of inflammatory, arthritic, rheumatoid diseases, etc., esp. as aerosols for interstitial lung disease. Beclomethasone dipropionate (I) 10 was incorporated into liposomes prep'd. with Na cholesterol sulfate 50 and cholesterol 40 mol %. Sustained release of I was obsd. in rats following intratracheal administration, in contrast to liposomes formulated with phosphatidylcholine and cholesterol.  
KW nonphospholipid sustained release liposome pharmaceutical; interstitial lung disease liposome aerosol; steroid nonphospholipid sustained release liposome  
IT Micelles  
(nonphospholipid pharmaceutical.)  
IT Lipids, biological studies  
(nonphospholipid, pharmaceutical liposomes of)  
IT Allergy inhibitors  
Neoplasm inhibitors  
Steroids, biological studies  
(nonphospholipid liposomes contg.)  
IT Interferons  
Vaccines  
(pharmaceutical liposomes contg. cholesterol and salt of cholesterol ester and)  
IT Gonadotropins  
(pharmaceutical liposomes contg. cholesterol and salt of cholesterol ester and)  
IT Lung, disease or disorder  
Skin, disease or disorder  
(treatment of, nonphospholipid pharmaceutical liposomes for)  
IT Haemophilus influenzae  
Streptococcus pneumoniae  
(vaccines, pharmaceutical liposomes contg. cholesterol and salt of cholesterol ester and)  
IT Pharmaceutical dosage forms  
(aerosols, liposomes, nonphospholipid liposomes in)  
IT Inflammation inhibitors  
(antiarthritics, nonphospholipid liposomes contg.)  
IT Inflammation inhibitors  
(antirheumatics, nonphospholipid liposomes contg.)  
IT Virus, animal  
(human immunodeficiency, vaccines, pharmaceutical liposomes contg. cholesterol and salt of cholesterol ester and)  
IT Lymphokines and Cytokines  
(interleukin 2, pharmaceutical liposomes contg. cholesterol and salt of cholesterol ester and)  
IT Lung, disease or disorder  
(interstitial, treatment of, nonphospholipid pharmaceutical liposomes for)  
IT Pharmaceutical dosage forms  
(liposomes, cholesterol and cholesterol ester salts in)  
IT Pharmaceutical dosage forms  
(liposomes, topical, nonphospholipid liposomes in)

(monoclonal, pharmaceutical liposomes contg. cholesterol and salt of cholesterol ester and)

IT Virus, animal  
(respiratory syncytial, vaccines, pharmaceutical liposomes contg. cholesterol and salt of cholesterol ester and)

IT Globulins, biological studies  
(.gamma.-, pharmaceutical liposomes contg. cholesterol and salt of cholesterol ester and)

IT 57-88-50, Cholesterol, esters, salts 2864-50-8 6614-96-6  
24352-55-4 99523-97-4 107745-49-3 107745-53-9 133058-04-5  
133058-05-6 133161-25-8 133161-26-9 133352-85-9 133352-86-0  
133442-36-1 133442-37-2 133442-38-3

(pharmaceutical liposomes contg. cholesterol and)

IT 50-02-2, Dexamethasone 50-07-7, Mitomycin 50-18-0,  
Cyclophosphamide 50-23-7, Hydrocortisone 50-24-8, Prednisolone  
51-41-2, Norepinephrine 51-43-4, Adrenaline 51-61-6, Dopamine,  
biological studies 51-64-9, Dextroamphetamine 52-39-1,  
Aldosterone 52-53-9, Verapamil 52-88-0, Atropine methyl nitrate  
53-03-2, Prednisone 53-06-5, Cortisone 53-33-8, Paramethasone  
57-22-7 57-42-1, Demerol 58-55-9, Theophylline, biological  
studies 58-73-1, Diphenhydramine 59-05-2, Methotrexate 60-54-8  
61-33-6, biological studies 64-85-7, Deoxycortone 68-88-20,  
Hydroxyzine, derivs. 71-68-1, Dilaudid 76-41-5, Oxymorphone  
83-43-2, Methylprednisolone 86-54-4, Apresoline 91-81-6,  
Pyribenzamine 100-33-4, Pentamidine 113-92-8, Chlorpheniramine  
114-07-8, Erythromycin 124-94-7, Triamcinolone 127-31-1,  
Fluorocortisone 152-97-6 153-61-7, Cephalothin 299-42-3,  
Ephedrine 317-34-0 356-12-7, Fluocinonide 378-44-9,  
Betamethasone 426-13-1, Fluorometholone 446-86-6, Azathioprine  
638-94-8, Desonide 645-05-6, Altretamine 671-16-9, Procarbazine  
768-94-5, Amantadine 807-38-5, Fluocinolone 1110-40-3,  
Cortivazol 1247-42-3, Meprednisone 1397-89-3, Amphotericin B  
1403-66-3, Gentamycin 1404-90-6, Vancomycin 1524-88-5,  
Flurandrenolone 2135-17-3 2607-06-9 2668-66-8, Medrysone  
3093-35-4, Halcinonide 3385-03-3, Flunisolide 3693-38-7,  
Fluclorolone 3778-73-2 4419-39-0, Beclomethasone 4697-36-3,  
Carbenicillin 5251-34-3, Clopredol 5534-09-8, Beclomethasone  
dipropionate 5874-97-5, Metaproterenol sulfate 7683-59-2,  
Isoproterenol 9002-60-2, ACTH, biological studies 9004-10-8,  
Insulin, biological studies 11056-06-7, Bleomycin 13010-47-4,  
Lomustine 15663-27-1, Cisplatin 15826-37-6, Cromolyn sodium  
18559-94-9, Albuterol 20830-81-3, Daunorubicin 22254-24-6,  
Ipratropium bromide 22916-47-8, Miconazole 23031-25-6,  
Terbutaline 23214-92-8 25953-19-9, Cefazolin 29122-68-7,  
Atenolol 30392-40-6, Bitolterol 30516-87-1 32986-56-4,  
Tobramycin 33419-42-0 35607-66-0, Cefoxitin 36791-04-5  
37517-28-5, Amikacin 38677-81-5, Pirbuterol 50370-12-2,  
Cefadroxil 51333-22-3, Budesonide 53643-48-4, Vindesine  
59277-89-3, Acyclovir 61477-96-1, Piperacillin 62571-86-2,  
Captopril 63527-52-6, Cefotaxime 64952-97-2, Moxalactam  
69049-73-6, Nedocromil 72301-79-2, Enviroxime 72332-33-3,  
Procaterol 75847-73-3, Enalapril 82410-32-0, Ganciclovir  
89365-50-4, Salmeterol \*\*\*90566-53-3\*\*\*  
(pharmaceutical liposomes contg. cholesterol and salt of  
cholesterol ester and)

IT 57-88-5, Cholesterol, biological studies  
(pharmaceutical liposomes contg. cholesterol ester salts and)

L4 ANSWER 4 OF 5 COPYRIGHT 1992 ACS

AN CA110(20):179552w

TI Formulations containing fluticasone propionate for treatment of  
bowel diseases

AU Richards, David Anthony

CS Glaxo Group Ltd.

LO UK

DD July 1992 Date Issued 17

PI GB 2199747 A1 20 Jul 1988  
AI GB 87-29756 21 Dec 1987  
PRAI GB 86-30913 24 Dec 1986  
IC ICM A61K031-56  
      ICS A61K009-28; A61K009-48  
SC 63-6 (Pharmaceuticals)  
SX 2  
DT P  
CO BAXXDU  
PY 1988  
LA Eng  
AB A pharmaceutical for the treatment of bowel diseases which respond to treatment with glucocorticoid steroids contains fluticasone propionate (I); the pharmaceutical may be administered by oral, topical, or rectal routes. A tablet contg. micronized I 5.0, lactose 92.5, croscarmellose Na 2.0, and Mg stearate 0.5 mg was coated with 5 mg of a film coating contg. Eudragit L30D 50.0, propylene glycol 1.5, talc 3.5, silicone antifoam emulsion 0.1 wt./wt., and H2O q.s. to 100 wt./wt.  
KW fluticasone enteric coated tablet; Crohn's disease fluticasone propionate tablet; inflammatory bowel disease fluticasone tablet; celiac disease fluticasone tablet; ulcerative colitis fluticasone tablet  
IT Celiac disease  
      (treatment of, fluticasone propionate-contg. pharmaceuticals for)  
IT Intestine, disease or disorder  
      (Crohn's, treatment of, fluticasone propionate-contg. pharmaceuticals for)  
IT Pharmaceutical dosage forms  
      (delayed-release, contg. fluticasone propionate for treatment of bowel diseases)  
IT Intestine, disease or disorder  
      (inflammatory, treatment of, fluticasone propionate-contg. pharmaceuticals for)  
IT Pharmaceutical dosage forms  
      (slow-release, contg. fluticasone propionate for treatment of bowel diseases)  
IT Pharmaceutical dosage forms  
      (tablets, enteric-coated, contg. fluticasone propionate for treatment of bowel diseases)  
IT Intestine, disease or disorder  
      (ulcerative colitis, treatment of, fluticasone propionate-contg. pharmaceuticals for)  
IT \*\*\*80474-14-2\*\*\* , Fluticasone propionate  
      (pharmaceuticals contg., for treatment of inflammatory bowel diseases)

L4 ANSWER 5 OF 5 COPYRIGHT 1992 ACS  
AN CA96(19):163044p  
TI Androstane carbothioates  
CS Glaxo Group Ltd.  
LO UK  
SO Neth. Appl., 63 pp.  
PT NL 8100707 A 16 Sep 1981  
AI NL 81-707 13 Feb 1981  
PRAI GB 80-5174 15 Feb 1980  
GB 80-13339 23 Apr 1980  
IC C07J003-00; A61K031-56  
SC 32-4 (Steroids)  
DT P  
CO NAXXAN  
PY 1981  
LA Neth  
GI Diagram(s) available in offline prints and/or printed CA Issue.  
AB Antiinflammatory (no data) androstanes I ( $R = \text{CH}_2\text{F}$ ,  $\text{CH}_2\text{Cl}$ ,  $\text{CH}_2\text{Br}$ ,  
CH<sub>2</sub>CH<sub>3</sub>)

H; R2R7 = CH<sub>2</sub>; R3 = H, Cl, F; R4 = H, F; R5 = R6 = H; R5R6 = bond) were prepd. Thus, I (R = CH<sub>2</sub>Cl, R<sub>1</sub> = COEt, R<sub>2</sub> = .beta.-Me, R<sub>3</sub> = F, R<sub>4</sub> = H, R5R6 = bond, R7 = H) was prepd. by treating the corresponding 17-carboxylic acid with Me<sub>2</sub>NCS<sub>1</sub>, hydrolyzing to the 17-thiocarboxylic acid, and esterifying with BrCH<sub>2</sub>Cl.

KW	halomethyl androstanecarbothioate; antiinflammatory halomethyl androstanecarbothioate				
IT	Inflammation inhibitors and Antiarthritics . (halomethyl androstanecarbothioates)				
IT	28416-82-2 37927-29-0 (acylation of)				
IT	53-34-9 338-95-4 2282-51-1 (oxidn. of)				
IT	80473-87-6P 80473-92-3P 80474-39-1P 80486-66-4P 80486-69-7P (prepn. and acylation of)				
IT	80473-82-1P 80474-61-9P 80474-66-4P 80474-67-5P 80474-73-3P 80474-74-4P (prepn. and chlorination of)				
IT	80486-68-6P (prepn. and collagen exchange of)				
IT	80473-96-7P (prepn. and deacylation of)				
IT	80473-84-3P (prepn. and elimination of oxygen from)				
IT	80473-85-4P 80473-88-7P 80474-34-6P 80474-38-0P 80474-43-7P 80474-45-9P (prepn. and esterification of)				
IT	80474-11-9P 80483-93-8P (prepn. and fluorination of)				
IT	80474-33-5P 80474-37-9P 80474-50-6P 80474-51-7P 80474-52-8P 80474-53-9P 80474-54-0P 80474-55-1P 80474-56-2P 80474-57-3P 80474-58-4P 80474-59-5P 80474-60-8P (prepn. and hydrolysis of)				
IT	80473-97-8P (prepn. and oxidn. of)				
IT	37927-23-4P (prepn. and reaction of, with dimethylthiocarbamoyl chloride)				
IT	80474-00-6P 80474-19-7P 80474-32-4P (prepn. and redn. of)				
IT	79578-10-2P 80473-90-1P (prepn. and thiolation of)				
IT	65429-42-7P 80473-83-2P 80473-86-5P 80473-89-8P 80473-91-2P 80473-93-4P 80473-94-5P 80473-95-6P 80473-98-9P 80473-99-0P 80474-01-7P 80474-02-8P 80474-03-9P 80474-04-0P 80474-05-1P 80474-06-2P 80474-07-3P 80474-08-4P 80474-09-5P 80474-10-8P 80474-12-0P 80474-13-1P ***80474-14-2P*** 80474-15-3P 80474-16-4P 80474-17-5P 80474-18-6P 80474-20-0P 80474-21-1P 80474-22-2P 80474-23-3P 80474-24-4P 80474-25-5P 80474-26-6P 80474-27-7P 80474-28-8P 80474-29-9P 80474-30-2P 80474-31-3P 80474-35-7P 80474-36-8P 80474-40-4P 80474-41-5P 80474-42-6P 80474-44-8P 80474-46-0P 80474-47-1P 80474-48-2P 80474-49-3P 80474-62-0P 80474-63-1P 80474-64-2P 80474-65-3P 80474-68-6P 80474-69-7P 80474-70-0P 80474-71-1P 80474-72-2P 80483-94-9P 80486-67-5P 80486-70-0P 80486-71-1P (prepn. of)				
IT	16420-13-6 (reaction of, with androstanecarboxylic acids)				
IT	3800-28-0 52510-14-2 65751-34-0 (reaction of, with dimethylthiocarbamoylchloride)				
IT	28416-82-2 37926-75-3 37927-06-3 59861-01-7 (thiolation of)				

FLUTICASONE + ASTHMA

TI Hydrofluorocarbon propellants for pharmaceutical aerosols  
AU Steele, Gerald; Somani, Asit; Lim, Joseph Geok Paan  
CS Fisons PLC  
LO UK  
SO PCT Int. Appl., 18 pp.  
PI WO 9111173 A1 8 Aug 1991  
DS W: CA, JP, US  
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE  
AI WO 91-GB133 30 Jan 1991  
PRAI GB 90-2351 2 Feb 1990  
GB 90-23655 31 Oct 1990  
GB 90-26476 5 Dec 1990  
IC ICM A61K009-12  
ICS A61K009-72  
SC 63-6 (Pharmaceuticals)  
DT P  
CO PIXXD2  
PY 1991  
LA Eng

L5 ANSWER 2 OF 3 COPYRIGHT 1992 ACS  
AN CA115(14):142260b  
TI Pharmaceutical inhalants containing a bronchodilator and a steroidial anti-inflammatory agent  
AU Palmer, James Barry Douglas  
CS Glaxo Group Ltd.  
LO UK  
SO Eur. Pat. Appl., 8 pp.  
PI EP 416951 A1 13 Mar 1991  
DS R: AT, DE, DK, ES, GR, LU, NL, SE  
AT EP 90-309846 7 Sep 1990  
PRAI GB 89-20392 8 Sep 1989  
GB 89-23644 20 Oct 1989  
IC ICM A61K031-57  
ICI A61K031-57, A61K031-135  
SC 63-6 (Pharmaceuticals)  
DT P  
CO EPXXDW  
PY 1991  
LA Eng

L5 ANSWER 3 OF 3 COPYRIGHT 1992 ACS  
AN CA114(20):192593n  
TI Nonphospholipid pharmaceutical liposomes  
AU Radhakrishnan, Ramachandran  
CS Liposome Technology, Inc.  
LO USA  
SO PCT Int. Appl., 96 pp.  
PI WO 9006775 A1 28 Jun 1990  
DS W: AU, DK, FI, JP, NO  
RW: AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, SE  
AT WO 89-US5525 6 Dec 1989  
PRAI US 88-284158 14 Dec 1988  
US 88-284216 14 Dec 1988  
IC A61K043-00; A61K049-00; A61K037-22  
SC 63-6 (Pharmaceuticals)  
SX 1<sup>st</sup>  
DT P  
CO PIXXD2  
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LA Eng

*FLUTICASONE + SALMETEROL*

L9 ANSWER 1 OF 3 COPYRIGHT 1992 ACS  
AN CA115(14):142260b

CA115(14):142260b  
TI Hydrofluorocarbon propellants for pharmaceutical aerosols  
AU Steele, Gerald; Soman, Asit; Lim, Joseph Geok Paan  
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LO UK  
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US 88-284216 14 Dec 1988  
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SC 63-6 (Pharmaceuticals)  
SX 1  
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PY 1990  
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FLUTICASONEX  
SALBUTAMOL

TI Hydrofluorocarbon propellants for pharmaceutical aerosols  
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LO UK  
SO PCT Int. Appl., 18 pp.  
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L10 ANSWER 2 OF 2 COPYRIGHT 1992 ACS  
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LO USA  
SO PCT Int. Appl., 96 pp.  
PI WO 9006775 A1 28 Jun 1990  
DS W: AU, DK, FI, JP, NO  
RW: AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, SE  
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IC A61K043-00; A61K049-00; A61K037-22  
SC 63-6 (Pharmaceuticals)  
SX 1  
DT P  
CO PIXXD2  
PY 1990  
LA Eng

=> d his

(FILE 'HOME' ENTERED AT 12:43:14 ON 06 MAR 92)  
SET COST OFF

FILE 'REGISTRY' ENTERED AT 12:47:20 ON 06 MAR 92  
E FLUTICASONE/CN

L1 1 S E3  
L2 1 S E4

FILE 'REGISTRY' ENTERED AT 12:48:29 ON 06 MAR 92  
L3 1 S E5

FILE 'CA' ENTERED AT 12:49:40 ON 06 MAR 92  
L4 5 S (FLUTICASONE#/IA OR L1 OR L2 OR L3)  
L5 3 S L4 AND (ASTHMA? OR INHAL? OR DOSE# OR AEROSOL?)/IA

FILE 'CA' ENTERED AT 12:51:09 ON 06 MAR 92

FILE 'REGISTRY' ENTERED AT 12:51:12 ON 06 MAR 92  
L6 1 S SALMETEROL/CN  
L7 0 S SALBUTANOL/CN  
L8 1 S SALBUTAMOL/CN

FILE 'CA' ENTERED AT 12:52:35 ON 06 MAR 92

17. 4,419,352, Dec. 6, 1983, Pyranoquinolinones and analogs thereof; David Cox, et al., 514/291, 232.5, 232.8, 826, 914, 925, 926, 927, 934; 544/126; 546/89, 92
18. 4,199,578, Apr. 22, 1980, Composition; Neil A. Stevenson, 514/171, 180
19. 4,045,439, Aug. 30, 1977, 6-Substituted-4-hydroxycinnolin-3-yl carboxylic acids and esters thereof; John Preston, et al., 544/235
20. 4,027,023, May 31, 1977, Cinnolin-3-yl carboxylic acids and derivatives; John Preston, et al., 514/248, 826; 544/235

=> s fluticasone

L6 2 FLUTICASONE

=> d 16 1-2

1. 4,985,418, Jan. 15, 1991, Pharmaceutical compositions; David A. Richards, 514/179, 180 [IMAGE AVAILABLE]

2. 4,906,476, Mar. 6, 1990, Novel liposome composition for sustained release of steroid drugs in lungs; Ramachandran Radhakrishnan, 424/450, 1.1, 9 [IMAGE AVAILABLE]

=> s salmeterol and fluticasone

1 SALMETEROL

2 FLUTICASONE

L7 1 SALMETEROL AND FLUTICASONE

=> d 17 1

1. 4,906,476, Mar. 6, 1990, Novel liposome composition for sustained release of steroid drugs in lungs; Ramachandran Radhakrishnan, 424/450, 1.1, 9 [IMAGE AVAILABLE]

=> s salmeterol and beclomethasone

1 SALMETEROL

150 BECLOMETHASONE

L8 1 SALMETEROL AND BECLOMETHASONE

=> d 18 1

1. 4,906,476, Mar. 6, 1990, Novel liposome composition for sustained release of steroid drugs in lungs; Ramachandran Radhakrishnan, 424/450, 1.1, 9 [IMAGE AVAILABLE]

=> s beclomethasone/clm

L9 35 BECLOMETHASONE/CLM

=> d 19 1-35

1. 4,957,744, Sep. 18, 1990, Cross-linked esters of hyaluronic acid; Francesco della Valle, et al., 424/401, 423, 443, 451, 489; 512/5; 514/54, 844, 880; 536/55.1 [IMAGE AVAILABLE]

2. 4,927,408, May 22, 1990, Electrototransport transdermal system; Ronald P. Haak, et al., 604/20; 128/798 [IMAGE AVAILABLE]

3. 4,913,692, Apr. 3, 1990, Preparation and use of new solvates of beclomethasone 17,21-dipropionate; Phillip R. Page, et al., 424/45; 514/180; 552/574

4. 4,906,476, Mar. 6, 1990, Novel liposome composition for sustained release of steroid drugs in lungs; Ramachandran Radhakrishnan, 424/450, 1.1, 9 [IMAGE AVAILABLE]

=> s 14 and beclomethasone

150 BECLOMETHASONE

LS 20 L4 AND BECLOMETHASONE

=> d 15 1-20

i. 4,912,131, Mar. 27, 1990, 4,7-diacyloxybenzofuran derivatives; Julian Adams, et al., 514/464, 320, 422, 452, 456, 469, 470; 546/196; 548/525; 549/362, 398, 435, 466, 467, 470

2. 4,906,654, Mar. 6, 1990, Cyclohept[b]indoleakanoic acids, pharmaceutical compositions and use; John W. Gillard, et al., 514/411; 548/439, 448

3. 4,895,719, Jan. 23, 1990, Method and apparatus for administering dehydrated liposomes by inhalation; Ramachandran Radhakrishnan, et al., 424/45; 514/958, 959; 604/140

4. 4,866,051, Sep. 12, 1989, Micronised ~~beclomethasone~~ dipropionate monohydrate compositions and methods of use; John H. Hunt, et al., 514/180,

826

5. 4,863,073, Sep. 5, 1989, Valve for aerosol container; Peter C. W. Burt, et al., 222/402.2, 453

6. 4,841,964, Jun. 27, 1989, Inhaler; Wilhelm Hurka, et al., 128/203.15, 203.23; 604/58

7. 4,829,996, May 16, 1989, Apparatus for producing a spray of droplets of a liquid; Timothy J. Noakes, et al., 128/200.14; 239/706

8. 4,814,161, Mar. 21, 1989, Drug-containing chlorofluorocarbon aerosol propellant formulations; Philip A. Jinks, et al., 424/45; 514/78, 95, 99, 149, 183, 255, 315, 506, 558, 740, 743, 762, 767, 786, 937

9. 4,811,731, Mar. 14, 1989, Devices for administering medicaments to patients; Robert E. Newell, et al., 128/203.15; 604/58

10. 4,778,805, Oct. 18, 1988, 4,7-benzofurandione derivatives useful as inhibitors of leukotriene synthesis; Julian Adams, et al., 514/320, 422, 452, 456, 464, 469, 470; 546/196; 548/525; 549/362, 398, 435, 466, 467, 468, 469, 470

11. 4,776,673, Oct. 18, 1988, Additive-containing paints; Giorgio Vernizzi, et al., 424/10; 514/826, 922, 957, 958, 974

12. 4,778,054, Oct. 18, 1988, Pack for administering medicaments to patients; Robert E. Newell, et al., 206/531, 469, 532, 538, 540

13. 4,775,680, Oct. 4, 1988, Cyclohept[b]indoleakanoic acids, pharmaceutical compositions and use; John W. Gillard, et al., 514/411; 548/439, 448

14. 4,758,433, Jul. 19, 1988, Oil extract of Tanacetum parthenium for treating migraine; Edward S. Johnson, et al., 424/195.1; 514/468; 549/299

15. 4,627,432, Dec. 9, 1986, Devices for administering medicaments to patients; Robert E. Newell, et al., 128/203.15, 200.19, 203.21; 221/30; 222/88; 604/58

16. 4,590,206, May 20, 1986, Inhalation pharmaceuticals; Raymond B. Forrester, et al., 514/456, 826, 951

[IMAGE AVAILABLE]

5. 4,904,474, Feb. 27, 1990, Delivery of drug to colon by oral dosage form; Felix Theeuwes, et al., 424/424, 426, 468
6. 4,895,719, Jan. 23, 1990, Method and apparatus for administering dehydrated liposomes by inhalation; Ramachandran Radhakrishnan, et al., 424/45; 514/958, 959; 604/140
7. 4,885,393, Dec. 5, 1989, Antiglaucoma agents; David R. Andrews, et al., 514/223.2, 19, 171, 223.5, 913
8. 4,879,274, Nov. 7, 1989, External medication for skin; Tetsuro Kamiya, et al., 514/12; 424/449; 514/29, 31, 39, 52, 110, 152, 154, 167, 174, 178, 179, 180, 182, 258, 270, 271, 274, 280, 282, 295, 301, 312, 356
9. 4,866,051, Sep. 12, 1989, Micronised beclomethasone dipropionate monohydrate compositions and methods of use; John H. Hunt, et al., 514/180, 826
- i0. 4,851,521, Jul. 25, 1989, Esters of hyaluronic acid; Francesco della Valle, et al., 536/55.1; 424/423, 443, 489; 514/54, 844, 880
- ii. 4,844,902, Jul. 4, 1989, Topically applicable formulations of gyrase inhibitors in combination with corticosteroids; Klaus Grohe, 424/449, 447  
[IMAGE AVAILABLE]
12. 4,840,772, Jun. 20, 1989, Antiglaucoma compositions and methods; Robert Watkins, et al., 422/61; 435/810; 436/808
13. 4,835,142, May 30, 1989, Powdery pharmaceutical composition suitable for application to mucosa of oral or nasal cavity; Yoshiaki Suzuki, et al., 514/53, 180
14. 4,814,161, Mar. 21, 1989, Drug-containing chlorofluorocarbon aerosol propellant formulations; Philip A. Jinks, et al., 424/45; 514/78, 95, 99, 149, 183, 255, 315, 506, 558, 740, 743, 762, 767, 786, 937
15. 4,810,488, Mar. 7, 1989, Physically modified beclomethasone dipropionate suitable for use in aerosols; Philip A. Jinks, 424/45; 552/574
16. 4,783,444, Nov. 8, 1988, Antiglaucoma compositions and methods; Robert Watkins, et al., 514/19, 912, 913, 914
17. 4,778,673, Oct. 18, 1988, Additive-containing paints; Giorgio Vernizzi, et al., 424/10; 514/826, 922, 957, 958, 974
18. 4,778,054, Oct. 18, 1988, Pack for administering medicaments to patients; Robert E. Newell, et al., 286/531, 469, 532, 538, 540
19. 4,765,983, Aug. 23, 1988, Adhesive medical tapes for oral mucosa; Hitoshi Takayanagi, et al., 424/434, 435, 449
20. 4,579,960, Apr. 1, 1986, Stable solutions containing thimerosal; Pui-Ho Yuen, et al., 556/2; 514/496
21. 4,478,822, Oct. 23, 1984, Drug delivery system utilizing thermosetting gels; John L. Haslam, et al., 424/78, 85.4, 94.3, 114, 116; 514/10, 11, 39, 45, 46, 54, 56, 152, 158, 162, 171, 179, 199, 203, 206, 218, 221, 263, 304, 420, 535, 768, 912
22. 4,474,752, Oct. 2, 1984, Drug delivery system utilizing thermosetting gels; John L. Haslam, et al., 434/78; 424/78, 85.4, 94.3, 114, 116; 514/39,

- 152, 162, 179, 357, 401, 472, 593, 822, 825, 826, 866, 906, 944
23. 4,414,209, Nov. 8, 1983, Micronized aerosol steroids; Peter B. Cook, et al., 514/180, 826, 958; 552/503, 529, 572, 574, 580, 581
24. 4,370,322, Jan. 25, 1983, Topically administrable pharmaceutical compositions containing anti-inflammatory steroids; Michael J. Busse, et al., 514/180, 837
25. 4,364,923, Dec. 21, 1982, Chemical compounds; Peter B. Cook, et al., 424/46, 45; 514/179
26. 4,350,690, Sep. 21, 1982, Steroid composition; Cyrus R. Kumana, 514/180, 925
27. 4,347,236, Aug. 31, 1982, Process for the preparation of a mixture of an anti-inflammatory steroid and a fluoro-chloro-hydrocarbon to be used as a propellant; Paavo T. Tanskanen, 424/45; 514/179
28. 4,343,798, Aug. 10, 1982, Topical antimicrobial anti-inflammatory compositions; Mahdi B. Fawzi, 514/179, 180, 887
29. 4,333,927, Jun. 8, 1982, Skin preparation; Kunihiko Ofuchi, et al., 514/174, 179, 180
30. 4,294,829, Oct. 13, 1981, Powdery pharmaceutical composition and powdery preparation for application to the nasal mucosa, and method for administration thereof; Yoshiki Suzuki, et al., 514/174, 180, 357, 401, 420, 428, 456, 653, 951
31. 4,225,597, Sep. 30, 1980, Beclomethasone dipropionate-hexane solvate and aerosols prepared therefrom; Lawrence E. Finckenor, 514/45, 957
32. 4,199,578, Apr. 22, 1980, Composition; Neil A. Stevenson, 514/171, 180
33. 4,044,126, Aug. 23, 1977, Steroidal aerosol compositions and process for the preparation thereof; Peter Barry Cook, et al., 514/180, 957
34. 4,041,055, Aug. 9, 1977, Process for the preparation of 17.alpha.-hydroxyprogesterones and corticoids from androstenes; Kenneth Paul Shephard, et al., 552/531; 540/112; 552/572, 573, 574, 576, 577, 580, 581, 595, 596, 597, 598, 639
35. 3,891,631, Jun. 24, 1975, Process for preparing 17.alpha.-monoesters of 17.alpha., 21-dihydroxy-20-oxo steroids; Gordon Hanley Phillipps, et al., 540/112; 552/506, 507, 534, 538, 573, 574, 576, 577, 581, 595
- => s 19 and inhalation/clm  
988 INHALATION/CLM  
L10 9 L9 AND INHALATION/CLM
- => d 110 i-9
1. 4,906,476, Mar. 6, 1990, Novel liposome composition for sustained release of steroid drugs in lungs; Ramachandran Radhakrishnan, 424/450, 1.1, 9 [IMAGE AVAILABLE]
2. 4,866,051, Sep. 12, 1989, Micronised beclomethasone dipropionate monohydrate compositions and methods of use; John H. Hunt, et al., 514/180, 826
3. 4,810,468, Mar. 7, 1989, Physically modified beclomethasone dipropionate

4. 4,414,209, Nov. 8, 1983, Micronized aerosol steroids; Peter B. Cook, et al., 514/180, 826, 958; 552/503, 529, 572, 574, 580, 581
5. 4,364,923, Dec. 21, 1982, Chemical compounds; Peter B. Cook, et al., 424/45, 45; 514/179
6. 4,347,236, Aug. 31, 1982, Process for the preparation of a mixture of an anti-inflammatory steroid and a fluoro-chloro-hydrocarbon to be used as a propellant; Paavo T. Tanskanen, 424/45; 514/179
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